

REMARKS

Applicants have amended the specification, added new Figures 11 and 12, and have amended claims 5 and 13 as set forth above. By way of example only, support for the amendment to the specification and for new Figures 11 and 12 can be found at: page 2, lines 14-20; page 6, lines 21-27; and originally filed claims 5, 9, and 10 in the above-identified patent application. No new matter has been added by way of these amendments. In view of the above amendments and the following remarks, reconsideration of the outstanding office action is respectfully requested.

The Office has objected to the drawings are objected to under 37 C.F.R. §1.83(a) alleging the container formed in a flexible material recited in claim 9 and the pump system recited in claim 10 is not shown in the drawings. Accordingly, as set forth above Applicants have added new Figures 11 and 12 which show the elements set forth in original claims 9 and 10. In view of the foregoing amendments and remarks, the Office is respectfully requested to reconsider and withdraw this objection.

The Office has rejected claims 1, 2, 4-8, and 10-18 under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,868,287 to Kurokawa et al. (Kurokawa), claims 1, 2, 4-8, and 10-18 under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 3,991,916 to Del Bon (Del Bon), claim 3 under 35 U.S.C. §103(a) as allegedly being unpatentable over Kurokawa or Del Bon, and claim 9 under 35 U.S.C. §103(a) as allegedly being unpatentable over Kurokawa in view of U.S. Patent No. 5,154,328 to Gueret (Gueret). The Office asserts Kurokawa in figures 30-32 discloses: moulding a first component including a tubular tube 56 forming a tubular outlet which is a thermoplastic elastomer; and moulding a second component 15 with more rigid material. The Office also asserts Del Bon in figures 4 and 5 discloses: moulding a first component including a tubular tube 24 forming a tubular outlet which is a thermoplastic elastomer; and moulding a second component 15 with relatively more rigid material.

Kurokawa, Del Bon, and Gueret, taken alone or in combination, do not disclose or suggest “moulding a second component about the first component, the second component being moulded in a second, relatively more rigid material, wherein the first component is moulded with the tubular outlet in an open configuration and moulding of the second component compresses the tubular outlet to a closed configuration, the tubular outlet

being elastically deformable, by the application of pressure to the tubular outlet, from the closed configuration to the open configuration.” as recited by claim 1, or, “wherein the tubular outlet is moulded in an open configuration and is at least partially encased in a casing of a more rigid material, the casing being moulded about the tubular outlet so as to hold the tubular outlet in its non-dispensing configuration,” as recited by amended claims 5 and 13.

As noted above, the Office asserts Kurokawa in Figs. 30-32 discloses moulding of a second component 15 which is a more rigid material. Applicants respectfully disagree with the Office’s assertion. Even though Kurokawa discloses a nozzle member 15 made of a more rigid material, such a nozzle member 15 is not “moulded” about the tubular outlet or second component, as claimed by the Applicants. In the description of Fig. 30, Kurokawa notes “one end of the tube member 56 is fitted under pressure into a vertical fixing hole 60 defined in the nozzle member 15,” (col. 7, line 66-col. 8, line 2, emphasis added) and “[o]ne end thereof is located close to and preferably inserted into the nozzle opening 21 of the nozzle body 14, and also serves as a dispensing port 57.” (col. 7, lines 45-47, emphasis added). In other words, Kurokawa relies upon a simple assembly of the nozzle and the cap which are fitted together by applying pressure. In contrast, Applicants claimed second component or casing is moulded about the first component or tubular member, such moulding resulting in holding the tubular member into a non-dispensing closed configuration. Because Kurokawa is not using moulding of a rigid material about a first less rigid material, Kurokawa’s apparatus does not and cannot compress the tubular outlet to a closed non-dispensing configuration.

Similarly, Del Bon, does not disclose or suggest the above-noted limitations of claims 1, 5, and 13. As noted above, the Office has asserted Del Bon in figures 4 and 5 discloses the above-noted limitations of claims 1, 5, and 13. However, in the description of figures 4 and 5, Del Bon at most discloses an actuator head 30 inserted into a closing cap 31 in a snap-in engagement (*see*, col. 8, lines 35-49). Such a snap-in arrangement is different from the Applicants’ claimed moulding of the second component made of a more rigid material about the first component made of a less rigid material, resulting in a compression of the first component made of less rigid material. Thus, Del Bon also fails to disclose or suggest at least this feature of claims 1, 5, and 13, and therefore fails to anticipate these claims. Similarly to Kurokawa and Del Bon, Gueret also does not disclose or suggest the above-noted limitations of claims 1, 5, and 13.

The approach taken by the claimed invention comprises first forming the tubular member using a less rigid material, then moulding the second more rigid material around and about the first material. As a result of this moulding, the first material becomes naturally compressed into a closed non-dispensing configuration by the more rigid material surrounding it. Then, when external pressure is applied to an actuator cap made using such a combination of moulded materials, the tubular member made of the first material pushes against the moulded more rigid second material due to the pressure of the emanating fluid from the pressurized storage can, and becomes open for the fluid to be dispensed out. However, upon removal of the external pressure, because the tubular member is surrounded by the more rigid material, it is forced back to the closed non-dispensing position, thereby forcing out any residual liquid in the process. As a result, the claimed invention avoids deposit of residual dispensed fluid in the dispensing tube after the external pressure is removed, as also noted, for example, in paragraph [0053] of the published patent application. None of the cited references disclose or suggest these distinguishing features or achieve these advantages of the claimed invention.

In view of the foregoing amendments and remarks, the Office is respectfully requested to reconsider and withdraw this rejection of claims 1, 5, and 13. Since claims 2-4 depend from and contain the limitations of claim 1, claims 6-12 depend from and contain the limitations of claim 5, and claims 14-18 depend from and contain the limitations of claim 13, they are distinguishable over the cited references and patentable in the same manner as claims 1, 5, and 13.

In view of all of the foregoing, it is submitted that the above application is in condition for examination.

Respectfully submitted,

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